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We have been much interested with the views advanced by the writer of the following article on the subject of *Fire-blight*, and, by the recommendation of some of our horticultural friends, (who think favorably of the author's theory,) we copy it into our columns, though it occupies a large portion of our space. The paper was read before the Indiana Horticultural Society, by the author, Rev. H. W. Beecher. We copy it from the Western Cultivator, published at Indianapolis:

THE BLIGHT.

The year 1844 will long be remembered for the extensive ravages of that disease hitherto denominated *fire-blight*. Beginning at the Atlantic coast, we have heard of it in Pennsylvania, Maryland, Virginia, Ohio, Kentucky, Indiana, and as far as Tennessee; and it is probable that it has been felt in every fruit-growing State in the Union, where the season of 1843 was the same as that west of the Alleghany range—namely, cold in spring, dry throughout the summer, and a wet and warm fall, with early and sudden winter.

In Indiana and Ohio, the *Blight* has prevailed to such an extent as to spread dismay among cultivators—destroying entire collections; taking half the trees in large orchards; affecting both young and old trees, whether grafted or seedlings, in soils of every kind. Many have seen the labor and fond hope of years cut off, in one year, by an invisible destroyer, against which none could guard; because, in the conflicting opinion, none were certain whether the disease was atmospheric, insect or chemical.

I shall now proceed to describe that blight known in the western States, (without pretending to identify it with the blight known in New York and New England;) to examine the theories proposed for its causation, and to present what now seems to me the true cause.

1. *Description.*

Although the signs of it, as will appear in the sequel, may be detected long before the leaves put out in the spring, yet its full effects do not begin to appear until May, or if the spring be backward, until June. On the wood of the last year, will be found a point where the bark is either dead and dry, or else at the same point the bark will be puffed, softened, or sappy, with thickened sap—these two appearances indicating only different degrees of the same blight. Wherever the bark is dead and dry, the limb will flourish above it, make new wood, ripen its fruit, but perish the ensuing winter. In the other case, as soon as the circulation of the sap becomes active, the point described shows signs of disease, the leaf turns to a darker brown than is natural to its ordinary decay, being nearly black, and the wood perishes.

The disease, at first, blights the terminal portions of the branch; but the affection spreads gradually downwards, and sometimes affects the whole trunk. The time from the first appearance of the blight to that in which any affected part dies, is various—sometimes, two or three weeks; sometimes, a day only; and sometimes, but rarely, even a few hours consummate the disaster.

On dissecting the branch, the wood is of a dirty, brownish yellow color; the sap thick and unctuous, of a sour, disagreeable odor, like that of a fermented watermelon, or the tops of potato-vines, after they have been frosted. In still, moist days, where the blight is extensive in an orchard, this odor fills the air, and is disagreeably perceptible at some distance from the trees.

Sometimes the bark bursts, the sap exudes, and runs down, turning black; and its acridity will destroy vegetation, on which it may drop; and shoots at a distance from the trunk, upon which the rain washes this ichor, will soon perish. When we come to treat of the *cause* of this disease, it will be important to remember this malignancy of the fluids.

We are carefully to distinguish these appearances, peculiar to what I suppose ought to be called *winter-blight*, from another and a *summer-blight*. In this last, the leaf is affected at first in spots; gradually the whole leaf turns russet color, and drops. Along the wood may be seen the hardened trail, as of a slimy insect, of an ash color. The *wood* suffers very little by this summer blight, and sometimes none. The *winter* blight is found on almost all kinds of trees. This summer, it has affected the apple, pear, peach, quince, the English hawthorn, privet, black birch, Spanish chestnut, elder, and calycanthus.

II. *Theories.*

A variety of theories exist as to the causes of this disease. Some are mere imaginations; some are only ingenious; and some so near to what I suppose to be the truth, that it is hardly possible to imagine how the discovery was *not* made.

The injury is done in the fall, but is not seen till spring, or summer, or even the next fall. Thus six months or a year intervene between the *cause* and the *effect*—a sufficient reason for the difficulty of detecting the origin of the evil.

1. Some have alleged that the rays of the sun, passing through vapors which arise about the trees, concentrate upon the branches, and destroy them by the literary energy of fire. Were this true, the young and tender shoots would suffer first and most; all pear trees would suffer alike; all moist and hot summers would be affected with blight; herbaceous plants would suffer more than ligneous—all of which results are contrary to facts.

2. Some have supposed the soil to contain deleterious substances, or to be wanting in properties necessary to health. But in either case, such a cause of the blight appears untrue, when we consider that trees suffer in all soils, rich or poor; that in the same soil, one tree is blighted, and the next escapes; that they will flourish for twenty years, and then blight; that a tree partially diseased recovers, and thrives for ten or more years, without recurrence of blight.

3. It has been attributed to violent and sudden changes of temperature in the air and of moisture in the earth; to sudden change from sward to high tillage; and the result is stated to be an "overplus" of sap, or a "surfeit." All these causes occur every year; but the blight does not every year follow them.

4. Others have attributed the disease to over-stimulation by high manuring, or constant tillage; and it has been said that covering the roots with stones and rubbish, or laying the orchard down to grass, would prevent the evil. Facts warrant no such conclusions.

5. It has been supposed by a few to be the effect of *age*—the disease beginning on old varieties, and propagated upon new varieties by contagion. Were this the true cause, we should expect it to be most frequently developed in those pear regions where old varieties most abound. But this disease seems to be so little known in England, that Loudon, in his elaborate Encyclopedia of Horticulture, does not even *mention* it. Mr Manning's statement will be given, farther on, to the same purport.

Insect Theory.

6. The confidence with which eastern cultivators pronounce the cause to be an *insect*, has in part served to cover up singular discrepancies in the separate statements in respect to the ravages, and even the species of this destroyer. The Genesee Farmer, of July, 1843, says, "the cause of the disease was for many years a matter of dispute, and is still, by some persons; but the majority are now fully convinced that it is the work of an insect, *(Scolytus pyri.)* T. W. Harris, in his work on Insects, speaks of the minuteness and obscure habits of this insect, as "reasons why it has eluded the researches of those persons who disbelieve in its existence as the cause of the blasting of the limbs of the pear tree." Dr. Harris evidently supposed, until so late as 1843, that this insect infested only the *pear tree*; for he says, "the discovery of the blight-beetle in the limbs of the apple tree, is a new fact in natural history; but it is easily accounted for, because this tree belongs not only to the same natural group, but also to the same genus as the pear tree. It is not, therefore, surprising, that both the pear and the apple tree should occasionally be attacked by the same insect.'" [Quoted in the Genesee Farmer, July, 1843, from the Mass. Ploughman.]

This insect is said to eat through the *alburnum* the hard wood, and even a part of the pith, and to destroy the branch by separation of part from part, as a saw would. On these facts, which there is no room to question, we make two remarks:

1st. That the blight thus produced is *limited*, and probably sectional or local. No account has met my eye which leads me to suppose that any considerable injury has been done by it. Mr Manning, of Salem, Mass., in the second edition of his Book of Fruits, states that he has "never had any trees affected by it"—the blight. Yet his garden and nursery has existed for twenty years, and contained immense numbers of trees.

2d. It is very plain that neither Mr Lowell, originally, nor Dr. Harris, nor any who describe the blight as caused by the blight-beetle, had any notion of that disease which passes by the same

PAGINATION INCORRECT

name in the Middle and Western States. The blight of the *Scolytus pyri* is a mere *girdling* of branches—a mechanical separation of parts: and mention is made of the most striking facts incident to the great blight—the viscid unctuous sap; the bursting of the bark, through which it issues; and its poisonous effects on the young shoots upon which it drops.

I do not doubt the insect blight; but I am sure that it is not *our* blight. I feel very confident, also, that this blight, which from its devastations, may be called the great blight, has been felt in New England in connexion with the insect blight, and confounded with it. The writer in Fessenden's American Gardener, (Mr Lowell?) says of the blight, "it is sometimes so rapid in its progress, that in a few hours from its first appearance, the whole tree will appear to be mortally diseased." This is not *insect*-blight; for, did the black beetle eat so *suddenly* around the whole *trunk?* Now, here is a striking instance of the great blight confounded with the minor blight—as I think will appear in the sequel.

This theory has stood in the way of the discovery of the true cause of the great blight; for every cultivator has gone in search of insects; they have been found in great plenty, and in great variety of species, and their harmless presence accused with all the mischief of the season. A writer in the Farmer's Advocate, Jamestown, N. C., discerned the fire-blight, and traced it to "small, *red*, pellucid insects, briskly moving from place to place on the branches." This is not the *Scolytus pyri* of Prof. Peck and Dr. Harris.

Dr. Mosher, of Cincinnati, in a letter published in the Farmer and Gardener, for June, 1844, describes a third insect—"*very minute brown-colored aphides*, snugly secreted in the axilla of every leaf on several small branches. * * Most of them were busily engaged with their proboscis inserted through the tender cuticle of this part of the *petiole* of the leaf, feasting upon the *vital juices* of the tree."

Dr. Mosher did not detect the insects without extreme search, and then only in colonies, on healthy branches. Do whole trees wither in a day by the mere suction of such insects?

While we admit a limited mischief from insects, they can never be the cause of the prevalent blight of the Middle and Western States.

I think that farther observation will confirm the following conclusions:

1. Insects are frequently found feeding in various ways upon blighted trees, or on trees which afterwards become so.

2. Trees are fatally blighted on which no insects are discerned feeding—neither aphides nor *scolytus pyri*.

3. Multitudes of trees have such insects on them as are in other cases supposed to cause the blight without a sign of blight following. This has been the case in my own garden.

III. *Cause of blight.*

The Indiana Horticultural Society, early in the summer of 1844, appointed a committee to collect and investigate facts on the Fire-Blight. While serving on this committee, and inquiring in all the pear growing regions, I learned that Reuben Reagan, of Putnam co., Ind., was in possession of much information, and supposed himself to have discovered the cause of this evil; and to him I am indebted for a first suggestion of the cause. Mr Reagan has for more than twelve years past suspected that this disease originated in the fall previous to the summer on which it declares itself. During the last winter Mr Reagan predicted the blight, as will be remembered by some of his acquaintances in Wayne co.; and in his pear orchards he marked the trees that would suffer and pointed to the spot which would be the seat of the disease; and his prognostications were strictly verified. After gathering from him all the information which a limited time would allow, I obtained from Aaron Alldredge of this place, a nurseryman of great skill, and possessed of careful, cautious habits of observation, much corroborative information; and particularly a tabular account of the blight for nine years past in his nursery and orchard.

The spring of 1843 opened early, but cold and wet, until the last of May. The summer was both dry and cool, and trees made very little growth of new wood. Toward autumn, however, the drought ceased, copious rains saturated the ground, and warm weather started all trees into vigorous, though late, growth. At this time, while we hoped for a long fall and late winter, on the contrary we were surprised by an early and sudden winter, and with unususl severity at the very beginning. In this region, much corn was ruined and more damaged; and hundreds of bushels of apples were caught on the trees and spoiled; one cultivator alone losing five hundred bushels. Caught in this early winter, what was the condition of fruit trees? They were making rapid growth, every part in a state of excitement, the wood unripe, the passages of ascent and descent impleted with sap. In this condition the fluids were suddenly frozen; the growth instantly checked; and the whole tree, from a state of great excitability, was, by one shock, rudely forced into a state of rest. Warm suns for a time, followed severe nights. What would be the effect of this freezing and thawing upon the fluids and their vessels? I have been able to find so little written upon vegetable morbid anatomy, (probably from the want of access to books,) that I can give but an imperfect account of the derangement produced upon the circulating fluids by congelation. We cannot state the specific changes produced by cold upon the ascending sap, or on the cambium, nor upon the elaborated descending current. There is reason to suppose that the two latter only suffer, and probably only the last. That freezing and thawing decomposes the coloring matter of plants is known; but what other decomposition, if any, is effected, I know not. The effect of congelation upon the descending sap of pear and apple trees, is to turn it to a viscid, unctuous state. It assumes a reddish, brown color; becomes black by exposure to the air; is poisonous to vegetables even when applied upon the leaf. Whether in some measure this follows all degrees of congelation, or only under certain conditions. I have no means of knowing.

The effect of freezing and thawing upon the tissues and sap vessels is better known. Congelation is accompanied with expansion; the tender vessels are either burst or lacerated; the excitability of the parts is impaired, or destroyed; the air is expelled from the æriferous cavities, and forced into the passages for fluids; and lastly, the tubes for the conveyance of fluids are obstructed by a thickening of their sides. The fruit trees in the fall of 1843, were, then, brought into a morbid state—the sap thickened and diseased; the passages lacerated, obstructed, and probably, in many instances, burst. The sap, elaborated, and now passing down in an injured state, would descend slowly, by reason of its inspissation, the torpidity of the parts, and the injured condition of the vessels. The grosser parts, naturally the most sluggish, would tend to lodge and gradually collect at the junction of fruit spurs, the forks of branches, or wherever the condition of the sap vessels favored a lodgement. In some cases, the passages are wholly obstructed; in others, only in part. At length, the spring approaches. In early pruning, the cultivator will find in those trees which will ere long develope blight, that the knife is followed by an unctuous sap, and that the liber is of a greenish yellow color. These will be the first signs, and the practised eye may detect them long before a leaf is put forth.

When the season is advanced sufficiently to excite the tree to action, the sap will, as usual, ascend by the alburnum, which has, probably been but little injured; the leaf puts out, and no outward sign of disease appear; nor will it appear until the leaf prepares the downward current. May, June, and July, are the months when the growth is most rapid, and when the tree requires the most elaborated sap; and in these months, the blight is fully developed. When the descending fluid reaches the point where, in the previous fall, a total obstruction had taken place, it is as effectually stopped as if the branch were girdled. For, the sap which had lodged there, would, by the winds and sun, be entirely dried. This would not be the case if the sap was good and the vitality of the wood unimpaired; but where the sap and vessels are both diseased, the sun affects the branch on the tree just as it would if severed and laying on the ground. There will, therefore, be found on the tree, branches with spots where the bark is dead and shrunk away below the level of the surrounding bark; and at these points, the current downward is wholly stopped. Only the *outward* part, however, is dead, while the *alburnum*, or sap wood, is but partially injured. Through, the alburnum, then, the sap from the roots passes up, enters the leaf, and men are astonished to see a branch, seemingly dead in the midlde, growing thriftily at its extremity. No insect theory can account for this case; yet it is perfectly plain and simple, when we consider that there are currents of sap, one of which may be destroyed,—and the other, for a *limited time*, go on. The blight, under this aspect, is nothing but *ringing* or *decortication* effected by diseased sap, destroying the parts in which it lodges, and then itself drying up. The branch will grow, fruit will set, and frequently become larger and finer flavored than usual.

But in a second class of cases, the downward current comes to a point where the diseased sap had affected only a partial lodgement. The vitality of the neighboring parts was preserved, and the diseased fluids have been undried by wind or sun, and remain more or less inspissated. The descending current meets and takes up more or less of this diseased matter, according to the particular condition of the sap. Wherever the elaborated sap passes, after touching this diseased region, it will carry its poison along with it, down the trunk, and by the latteral vessels, in towards the pith. We may suppose that a violence, which would destroy the health of the outer parts, would, to some degree, rupture the inner sap-vessels. By this, or by some unknown way, the diseased sap is taken into the inner, upward current, and goes into the general circulation. If it be in a diluted state, or in small quantities, langor and decline will be the result; if in large quantities, and concentrated, the branch will die suddenly, and the odor of it will be that of frost-bitten vegetation.

All the different degres of mortality result from the quality of the diseased sap which is taken into circulation. In conclusion, then, where, in one class of cases, the feculent matter was, in the fall, so virulent as to destroy the parts where it lodged and was then dried by exposure to wind and sun, the branch above will live, even through the summer, but perish the next winter; and the spring afterwards, standing bare amid green branches, the cultivator may suppose the branch to have blighted that spring, although the cause of death was seated eighteen months before. When, in the other class of cases, the diseased sap is less virulent in the fall, but probably growing worse through the spring, a worse blight ensues, and a more sudden mortality.

I will mention some proofs of the truth of this explanation.

1. The two great blight years throughout this region, 1832 and 1844, were preceded by a summer and fall such as I have described. In the autumns of both 1831 and 1843, the orchards were overtaken by a sudden freeze while in a fresh-growing state; and in both cases the consequence was excessive destruction the ensuing spring and summer.

2. In consequence of this diagnosis, it has been found practicable to predict the blight six months before its developement. The statement of this fact, on paper, may seem a small measure of proof; but it would weigh much with any candid man to be told by an experienced nurseryman, this is such a fall as will make blight; to be taken during the winter into the orchard and told, this tree has been struck at the junction of these branches; that tree is not at all affected; this tree will die entirely the next season; this tree will go first on this side, &c., and to find, afterwards the prediction verified.

3. This leads me to state separately the fact, that, after such a fall, blighted trees may be ascertained during the process of late winter or early spring pruning.

In pruning before the sap begins to rise freely, no sap should follow the knife in a healthy tree. But in trees which have been affected with blight a sticky, viscid sap exudes from the wound.

4. Trees which ripen their wood and leaves early are seldom affected. This ought to elicit careful observation; for, if found true, it will be an important element in determining the value of varieties of the pear in the middle and western States, where the late and warm autumns render orchards more liable to winter-blight than N. E. orchards.

5. Wherever artificial causes have either *produced* or *prevented* a growth so late as to be overtaken by a freeze, blight has, respectively, been *felt avoided.* Out of 200 pear trees, only four escaped in 1832, in the orchard of Mr. Reagan. These four had, the previous spring, been *transplanted* and had made little or no growth during summer or fall. If however they had recovered themselves during the summer so as to grow in the autumn, transplanting would have just the other effect; as was the case in a row of pear trees transplanted by Mr. Alldredge, in 1843. They stood still through the summer and made growth in the fall, were frozen, and in 1844 manifested severe blight.

6. Mr. White, a nurseryman near Mooresville, Morgan county, Ia., in an orchard of from 150 to 200 trees, had not a single case of the blight in the year 1844; though all around him its ravages were felt. What were the facts in this case? His orchard is planted on a mound-like piece of ground; is high, of a sandy, gravelly soil; earlier by a week than nursery soils in this county; and in the summer of 1843 his trees grew through the summer; wound up and shed their leaves in the fall, and during the warm spell made no *second growth.* The orchard, then, that escaped, was one on such a soil as ensured an *early* growth, so that the winter fell upon ripened wood.

7. It may be objected that if the blight *began* in the new and growing wood, it would appear there; whereas the seat of the evil, i. e. the place where the bark is diseased or dead is lower down and on old wood. Certainly, it should be; for the returning sap falls some ways down before it effects lodgement.

8. It may be said that *spring-frosts* might produce this disease. But in the spring of 1834, in the last of May, after the forest trees were in full leaf, there came frost so severe as to cut every leaf: and to this day the dead tops of the beech attest the power of the frost. But no *blight* occurred that year in orchard, garden or nursery.

9. It may be asked why forest trees do not suffer. To some extent they do. But usually the dense shade preserves the moisture of the soil, and favors an equal growth during the spring and summer; so that the excitability of the tree is spent before autumn, and it is going to rest when frosts strike it.

10. It may be inquired why fall-growing shrubs are not always blighted, since many kinds are invariably caught by the frost in a growing state.

I reply, first, that we are not to say that *every* tree or shrub suffers from cold in the same manner. We assert it of fruit-trees because it has been observed; it must be asserted of other trees only when ascertained.

I reply more particularly, that a *mere frost* is not supposed to do the injury. The conditions under which blight is supposed to originate are, a growing state of the tree, a sudden *freeze*, and sudden thawing.

We would here add that many things are yet to be ascertained before this theory can be considered as settled; as, the actual state of the sap after congelation, ascertained by experiment; the condition of sap-vessels, as ascertained by dissection; whether the congelation, or the thawing, or both, produce the mischief; whether the character of the season *following* the fall-injury, may not materially modify the malignancy of the disease; seasons that are hot, moist and cloudy, propagating the evil and others dry, and cool, restraining growth and the the disease. It is to be hoped that these points will be carefully investigated, not by conjecture, but by scientific processes.

11. We have heard it objected, that, trees grafted in the spring, blight in the graft during the summer. If the *stock* had been affected in the fall, blight would arise from *it*; if the scion had, in common with the tree from which it was cut, been injured, blight must arise from *it.*

Blight is frequently caused in the nursery; and the cultivator, who has brought trees from the distance, and with much expense, has scarcely planted them before they show blight and die.

12. It is objected, that while only a single branch is at first affected, the evil is imparted to the whole tree; not only to the wood of the last year, but to the old branches. I reply, that if a single branch only should be affected by fall frost, and be so severely affected as to become a repository of much malignant fluid, it might gradually enter the system of the whole tree, through the circulation. This fact shows why *cutting* is a partial remedy; every diseased branch removed, removes so much poison; it shows also why cutting from *below* the seat of the disease (as if to fall below the haunt of a supposed insect) is beneficial. The farther the cut is made from that point where the sap has clogged the passages, the less of it will remain to enter the circulation.

13. Trees of great vigor of constitution, in whose system but little poison exists, may succeed after a while in rejecting the evil, and recov Where much enters the system, the tree must die; and with a suddenness proportioned to the amount of poison circulated.

14. A rich and *dry* soil would be likely to promote early growth, and the tree would finish its work in time; but a rich and *moist* soil, by forcing the growth, would prepare the tree for blight; so that rich soils may prevent or prepare for the blight, and the difference will be, the difference of the respective soils in producing an early instead of a late growth.

IV. *Remedy.*

So long as the blight was believed to be of insect origin, it appeared totally irremediable. If the foregoing reasoning be found correct, it will be plain that the scourge can only be occasional; that it may be in a degree prevented; and to some extent remedied where it exists.

1. We should begin by selecting for pear orchards a warm, light, rich, dry and early soil. This will secure an early growth and ripe wood, before winter sets in.

2. So soon as observation has determined t kinds are naturally early-growers and early-ripeners of wood, such should be selected; as they will be least likely to come under those conditions in which blight occurs.

3. Wherever orchards are already planted; or where a choice in soils cannot be had, the cultivator may know by the last of August or September, whether a fall-growth is to be expected. To prevent it, I suggest immediate *root-pruning.* This wil benefit the tree, at any rate; and will probably, by immediately restraining growth, prevent blight.

4. Whenever blight has occurred, I know of no remedy but free and early *cutting.* In some cases it will remove all diseased matter; in some, it will alleviate only: but in bad blight, there is neither in this, nor, in any thing else that I am aware of, any remedy.

There are two additional subjects with which I shall close this paper:

1. This blight is not to be confounded with *winter-killing.* In the winter of either 1837 or 1838, in March a deep snow fell (in this region;) and was immediately followed by brilliant sun. Thousands of nursery trees perished in consequence, but without putting out leaves, or lingering. It is a familiar fact to orchardists that severe cold followed by warm suns produce a bursting of the bark along the trunk; but usually at the surface of the ground.

2. I call the attention of cultivators to the disease of the Peach tree, called "The Yellows." I have not spoken of it as the same disease as the *blight* in the pear and apple, only because I did not wish to embarrass this subject by too many issues. I will only say that it is the opinion of the most intelligent cultivators among us, that the yellows are nothing but the developement of the blight according to the peculiar habits of the Peach Tree. I mention it that observation may be directed to the facts.

HENRY W. BEECHER.

☞We perceive that our estimable friend, J. S. Skinner, Esq., is again to be connected with the press, as editor of the agricultural department of that popular and widely circulated journal, the New York *Albion*. We rejoice in this arrangement, by which we shall again have the pleasure (as his readers will the *profit,)* of his always interesting writings. We subjoin Mr Skinner's address upon entering anew in his old vocation, which he adorns by his virtues and honors by his abilities:

"In undertaking to conduct, for the Proprietor of the *Albion*, a department appropriated to Agriculture and Horticulture, the undersigned begs it may be believed that he enters upon the task with a full sense of the responsibility it imposes. Though he may not bring to its performance all the skill and various knowledge which may be requisite to the highest degree of success, he does not hesitate to promise an example of that industry which it will be his duty to inculcate; animated as he is by the same, and even more zeal in the cause of agricultural improvement than that which prompted him, more than a quarter of a century ago, to establish the first periodical dedicated to American Husbandry. Friends of the Plough! what a change has "come o'er the spirit of our dream" since that epoch! Not only was that doubtful experiment crowned with success, but many other and abler journals have been annually coming into existence all over the country, begetting an appetite for disquisitions on every branch of rural industry, which, far from being satisfied with abundant supplies, seems to increase by what it feeds upon, until, happily, it has come to pass that those who are destined to earn their livelihood by tilling the soil, now more and more regard their pursuit, as one which demands, not only a close observation of field practice, and of actual results, but an active *exercise of the mind*, to the end that, by a better knowledge of all the principles involved, and all the agencies by which they are produced, these results may be *controlled and modified.* With these views it will be equally the duty and the pleasure of the undersigned to encourage, and yet more widely diffuse, the sentiment that Agriculture and Horticulture are in truth connected (as well in theory as in practice,) with various interesting studies; and that in proportion as we advance in a knowledge of all the sciences akin to those pursuits, laws of nature hitherto unthought of, will be revealed, and new objects, infinitely variegated and interesting, be disclosed, over which the mere practical man passes, without perception or relish; just as the blind man in the country, (so much to be commiserated,) is insensible to the glories of our autumnal scenery, and all the varied beauties of creation. Such is the melancholy contrast between the unenlightened and the cultivated agriculturist.

But, while it is intended that the commentaries and reflections of the Editor, and his extracts adapted to our country, to be taken chiefly from the most recent European works and journals, shall be of a nature to promote habits of intellectual investigation, the paramount aim will be to make known to the reader such new and practically useful discoveries, as, when availed of, shall augment the product of all capital, in any form employed, in any branch of rural industry. In a word, and without further preface, it is designed to distil the *spirit* from the mass of foreign agricultural journals, and with it so sprinkle and refresh our fields and gardens, as to ensure for all their products a more vigorous growth, and more fruitful bearing.

The arrangement for an Agricultural Department in the *Albion* newspaper, cannot affect injuriously, the interests of any of the many agricultural publications now circulated in America. The editor would decline any and all connexions that might thus encroach on the patronage justly due to his co-laborers in the wide field of agricultural improvements.

The *Albion* circulates not merely among a large circle of American friends, but also among the natives of Great Britain—in Europe, as well as in the United States; and as a country can in no way be better known than by its agriculture, it is conceived that much good may be effected by familiarizing its foreign readers with the *condition of Agriculture in America;* furnishing facts, showing *how* and *where* the foreigner may best promote his own welfare, and advance the interests of his adopted country, when "settling" with his family, either in the new or the old States of the American confederacy. So far from desiring to trench upon the well deserved patronage of the regular agricultural journals, it is repeated, the editor is well persuaded that the interest awakened by the agricultural articles of the *Albion*, widely read as those articles will be over a large portion of the world, will contribute considerably towards turning attention to the American agricultural journals, as the best sources of practical and exact information concerning the condition and prospects of the industrial interests and capacities of the people and the soil of the United States.

There is no possession of which the undersigned is more proud, than of the esteem with which he flatters himself he has been honored, with a good deal of uniformity, by the conductors of the agricultural and of the general press of the country; and he takes the occasion to renew to them, of all parties, the assurance that there can be no degree of inclination to kind offices, on their part, that he does not fully and earnestly reciprocate. Finally, to gratify an inborn propensity, and to employ the few hours of leisure in some hope of being useful, that might otherwise be whiled away in frivolous amusement, he seeks only to enter and take the hindmost row in the field, content though he should only glean what may be scattered in a profuse harvest, by more stalwart reapers, in a manly contest for the head.

J. S. SKINNER."

Cut Worms.—To the remark that "cut-worms may be destroyed by continued tillage and a naked and open soil," I beg to say, the cut-worm would not be found in corn, were it not planted in sward or sod land. They are the progeny of a species of beetle or other insect, which could never propagate its kind without the aid of dung, which is found in grass-fields, that have been fed by horses or cattle, and in this they enclose their egg or eggs and sink them a given distance below the surface; hence, an autumnal or winter plowing of such land destroys them, by exposure to the rains and frosts of that inclement season—a doctrine which has at last met with the concurrence of every practical man among us.—*Correspondent of the Boston Cultivator.*

Before we passionately desire what another enjoys, we should examine into the happiness of its present possessor.

For the N. E. Farmer.

ENGLISH AND AMERICAN PLOWS.

Mr Breck—In an account of the "great meeting of the Royal Agricultural Society at Southampton," England, in July last, I find in the "Illustrated London News," of 27th July, the following account of the trial of plows:

"There were sixteen plows started, among which were two specimens of American plows presented by Professor Colman. The contrast between the working of these transatlantic plows and the English ones, was most striking, and was the most perfect practical refutation of the self-congratulatory remarks of Daniel Webster, who, on his return from England, stated that he had not seen any implement in England worthy of comparison with those of America. We particularly examined the work of these plows, and, compared with the level and accurate furrows made by the English plows, which appeared as though cut out by a plane, they were coarse, rough and irregular. The work of the competing plows, with the two exceptions we have alluded to, was generally good; especially so, considering the state of the soil."

The plows taken out by (or sent to) Mr Colman, I have understood were the Worcester plows, manufactured by Ruggles, Nourse & Mason—whose plows, with the "Centre-draft" ones of Prouty & Mears, and Howard's, of Hingham, give very general satisfaction to the Yankee farmers, who have purchased and given them a fair trial. I have seen ground plowed, and furrows made by them "which appeared as though cut out by a plane." But if they have plows in England so much superior to the above-named, I hope some of the wealthy, public-spirited gentlemen of your city, will write to Mr Colman to forward a few of them.

I had hoped that Mr C.'s second report would have said something about the trial of plows at Southampton, and given us the reasons why "these transatlantic plows" worked so "coarse, rough, and irregular" in an English soil; and whether the failure was owing to the plows, or the plowmen, or English prejudice.

The slur, or side-thrust, aimed at the Farmer of Marshfield, I think is wholly gratuitous and unwarranted. "The self-congratulatory remarks" of Mr Webster, alluded to, are probably those made by him at the agricultural meeting held in Boston, on the evening of January 13th, 1840. The speech of Mr W. was published in pamphlet form. I here make a few extracts, that tell us what he did say, by way of comparison, and they show how easy it is for prejudice to misrepresent and give an entire different coloring to plain facts:

"In respect to implements of husbandry, Mr Webster was of opinion that the English, on the whole, had no advantage over us. Their wagons and carts were no better; their plows, he thought, were not better anywhere, and in some counties, far inferior, because unnecessarily heavy. In general, he thought the English utensils of husbandry were unnecessarily cumbrous and heavy. The plows, especially, required a great strength of draught."

The above, I apprehend, is the full amount of Mr Webster's offence, and the full extent of his comparison between English and American farming implements.

Yours, truly, B.

Cut off the dead limbs on your fruit trees.

For the New England Farmer.

THE POTATO CROP.

Mr Editor—The potato crop is one of our most valuable agricultural products, but for several years past, the *rust*, or as it is called in England, the "*curl*," has been making and extending its ravages in every direction; and for the past two seasons, the *rot* has prevailed in many sections of the country to an alarming degree. Whether the rust has any connexion with the rot, I am unable to say; but generally, I believe the potatoes have suffered much more by the rot where the tops were earliest killed by the rust. Possibly, the rust or premature death of the tops, may have predisposed and caused the tubers to rot and decay.

There have been many reasons assigned, and theories offered, to account for the rust or curl in the potato.

In the course of my reading for some years past, I have several times seen it stated, that the planting of thoroughly ripened seed was the cause of the rust, and that the using of unripe potatoes for planting, was a preventive of rust. Having always been of the opinion that good and well ripened seed, in all cases, should be used to insure a good crop of corn or grain, or any other crop we wish to cultivate, I had supposed the same rule would apply to the potato—but, you know, there are *exceptions* to general rules.

In the N. E. Farmer, of 5th of last June, you have copied from an English paper, (as I think) a very sensible and philosophical article, "On the Curl in Potatoes," by a Mr Deans. Those of your subscribers who keep files of the Farmer, can turn to it and read the whole article, and for the benefit of such as have not the paper on hand, I will make a few extracts.

Mr Deans says: "The curl in potatoes is the effect of an enfeebled vegetation, arising from over-ripening of the tubers used for seed. Whenever potatoes are to be used for seed, they require a mode of treatment very different from those designed to be used as food. The mode which I prefer to all others for seed potatoes, is this: as soon as the tubers have acquired their full size, and the vegetable tissue in the roots has become perfect, the skins beginning to set,—that is, when the cuticle can still be removed by the pressure of the finger and thumb, so that it peels off;—at this stage of their growth, they ought to be immediately taken up, and spread upon the surface of the ground, fully exposed to the influence of the atmosphere; by which means, in a short time the tubers will be tanned green. This early digging prevents the cellular tissue of the tubers from becoming gorged with solid matters, by cutting off the power of absorption from the roots; whilst, by the subsequent exposure of the tubers to the atmosphere, the juices combine with a larger proportion of oxygen, which, in the light, enters into combination with the coloring matter of these roots, not only changing their color from white to green, but also giving to them an increased vitality, as is seen in germination, when oxygen enters into combination with the juices, and carbonic acid is parted with; by which means the starch in the tubers, instead of becoming fixed, is retained in the transition state; so that when those conditions calculated to excite vegetation are present, the organizable matter in the tuber immediately excites the buds or eyes to vigorous growth. Similar results, to a certain extent, may be obtained by very late planting; so that when the process of vegetation is stopped by the autumnal frosts, the maturation of the secretions of the plant may be somewhat in the transition state; that is, they may not have acquired the solidity I have alluded to."

In the N. E. Farmer, of Sept. 25th, you have an article on "Selecting Seed Potatoes," which goes strongly to corroborate the views of Mr Deans.

Several cases that have come under my observation, I think also, go far to establish the truth of the above theory.

Several years ago, a Mr Johnson, a good farmer, in this town, whose farm is situated upon a very high hill, by having manured a piece of oat-stubble ground, and plowing the previous autumn, he was, in consequence of that and an early spring, enabled to plant his potatoes the last days in April. He raised a very large crop. A drought in August and September, almost cut off the late planted ones, of other farmers, and Mr J. was enabled to sell a large quantity at a good price, and having succeeded so well by his early planting, the next year he planted again as early as possible; the seed was of his well ripened crop of the previous year; but in August, the tops were all killed by the rust. It was the first time it had made its appearance on his farm, and he had a poor crop of potatoes, and of a poor quality. But it never occurred to him, or any one else, that planting his good ripe seed had anything to do with the premature death of potato tops.

Last year, a Mr K., whose farm lies south of mine, planted, the very last of April, a good piece of pasture land that was broken up the previous autumn. It had a southern exposure, and had been well folded by the cattle in the pasture, and he had a very heavy crop of potatoes. The last spring, he planted with the seed raised upon the pasture land, and his entire crop this year was the earliest and worst killed by the rust, of any I have seen—and a third part were rotten when he dug them, and nearly another third rotted after they were put into the cellar.

A Mr R., whose farm lies half a mile east of mine, and who from habit or necessity, is always behind his work, seldom plants his potatoes till from the 20th of June to the 10th of July. Never have his potato tops been killed till the frost comes. This year he had a field nearly as green when the frost came, as they were any time in the season, and not a rotten one on an acre—while upon the adjoining farms, the tops had been dead for weeks, except the Long Reds. Mr R. admits that his potatoes are not so good for the table as earlier planted and well ripened ones.

In September, 1839, and again in Sept., 1841, I was upon Mr Phinney's farm, in Lexington. His large fields of potatoes were then green and flourishing, while the tops of nearly every piece of potatoes between this place and L., were dead. Mr P. informed me that he did not usually plant his main crop till about the 20th of June, or later; by his late planting he avoided the rust that generally attacked the earlier planted: the tops of the late planted kept green till killed by the frost. Probably his crop were not over-ripened, and by using seed of these unripe potatoes, he did not suffer from rust. Any communication from Mr P. to the public, through the press, upon the subject, would be interesting and useful.

The summer of 1816, was one of the coldest upon record; but very little corn ripened, and the crop of potatoes was light and of poor quality. In the spring of 1817, they were so scarce here that they were sold from 50 cents to one dollar per bushel, and the scarcity was so great, that they were cut as fine for planting as the famous Rohans were when they were first introduced; but notwithstanding, there was one of the greatest crops that season, ever raised here; and in the autumn, any quantity could have been purchased at ten or twelve cents per bushel. Quere—Had the unripe seed of 1816, any thing to do with the great crop of 1817?

The Chenango is an early potato. They have for several years rusted badly, and this year, rotted the most of any. The Long Reds, that you extolled so highly, in the N. E. Farmer, of Oct. 28th, are a very late kind, and it is probable they seldom ever get perfectly ripe—and I do not recollect of ever seeing or hearing of their suffering by the rust.

Notwithstanding the weight of "circumstantial evidence" I have brought forward in support of the theory of using unripe seed, I think it will be necessary to make many accurate experiments to test the truth of it. I have engaged of Mr R. (referred to in this,) some of his late planted and unripe seed, to test next season "row by row" with fully ripened seed of the same varieties, and if nothing prevents, will give the result, and I hope many others will do the same.

L. BARTLETT.

Warner, N. H., Dec. 10, 1844.

COB MEAL.

Messrs. Editors—I noticed some time since, an article in your paper, (editorial, I think,) in which it was urged upon farmers to *grind their cobs*, as the meal was valuable for many purposes on the farm—particularly for poultry, hogs, and stock.

On the strength of this suggestion, I acted, and I can now assure you, so well satisfied am I with the result, that my cobs will never, as heretofore, be uselessly thrown away. As I grind my cobs with the corn, I cannot speak definitely as to the value of cob-meal when used in its unmixed state, but I am satisfied that there is a very important saving attained by grinding the cobs. I have, during the last three months, fed corn and cob-meal to my horses, cattle, hogs and calves, and as I have a large stock this winter, the saving to me, from this simple suggestion, has, I assure you, been of no small value as regards the *purse*.

—*Maine Cult.* ECONOMIST.

EXPERIMENT WITH GUANO.

I had plowed one acre of greensward about the 1st of August, divided it into equal parts, for quantity and quality, as near as could be. On the 3d of August, on one-half I spread 51 bushels unleached ashes—on the other half I sowed broadcast 250 lbs. guano—then sowed turnip-seed broadcast, through and through; then harrowed all in, going through and through, without regard to the division. In two weeks the line of division was perfectly perceptible to the eye 100 rods distant. From that part on which the guano was sowed, I gathered 113 bushels turnips. On the part ashed, I gathered only 43 bushels. The ashed turnips were gathered 4 or 5 days later than the guanoed.

51 bush. ashes at 1s. $8 50, produced 43 bu. turnips;
250 lbs. guano, 3 cts. $7 50, " 113 " "

WM. P. CLEVELAND.

—*New London pap.*

The great step to greatness is to be honest.

PAGINATION INCORRECT

NEW ENGLAND FARMER,
AND HORTICULTURAL REGISTER.

Edited by Joseph Breck.

Boston, Wednesday, Dec. 25, 1844.

FALLEN LEAVES FOR MANURE, HOT BEDS, &c.

There is not any manure perhaps that is more desirable for most of the great variety of plants that come under the care of the Horticulturist and Farmer than a fine leaf mould; with some particular classes of plants it is indispensible for their perfect development, and for all, the most natural that can be applied. With a little care and labor every farmer or gardener might greatly increase his compost heap by devoting a few hours of his leisure moments in collecting from the hedges and woodlands the fallen leaves and decaying twigs. They will also answer another important purpose before they can be converted into a suitable compost for enriching the land—they form the best material for making hot beds. It is not yet too late to secure them, as any time before the ground is covered with snow will answer, although it would have been better to have attended to it the last month.

In looking over some odd numbers of the Massachusetts Agricultural Repository, vol. 4, page 60, we found some extracts from an English paper, with remarks by the late Hon. John Lowell, which we present to our readers, feeling assured that although written more than 25 years since, they are, nevertheless, as good as any thing that can be said upon the subject now.

The communication is as follows: "A correspondent of the Bath Society in England, warmly recommends a species of manure for potatoes, which I think peculiarly applicable to our country, because easily attainable. It is the employment of mould and *fallen leaves* taken from the woods. This, the writer observes, he has found an excellent substitute for other manure. He found his potatoes raised in this way, much more mealy, and of a finer flavor, much finer than when produced by the application of dung and ashes; and he considered it of great importance to poor people, who have not the means of procuring much dung. This, he observes, can always be procured in woody countries, and in those which are not so, it may be obtained in hedges and ditches and in old ponds. If this be a fact, and we have little doubt of it, since it is known that few substances are more favorable to vegetation than rotten leaves, and the soil formed by their decomposition, there is scarcely a farmer in Massachusetts, who may not by two or three days labor, collect enough to plant all his potatoes, and then save his manure for his corn and grass lands.

The leaves of trees are very valuable for the purposes of gardening and for fruit trees. Speechly, an eminent English garden , gives the following account of his mode of using them:

After being raked into heaps they should immediately be carried to some place near the hot house where they must lie to couch. I generally fence them round with hurdles or anything else to keep them from being blown about the garden, in windy weather. In this place we tread them well and water them, in case they happen to have been brought in dry. We make the heap six or seven feet in thickness, covering it over with old mats, or anything else, to prevent the upper leaves from blowing away. In a few days the heap will come to a strong heat. For the first year or two that I used these leaves, I did not continue them in the heaps longer than ten days or a fortnight; but in this I discovered a considerable inconvenience, as they settled so much when got into the hot house, as soon to require a supply. Taught by experience, I now let them remain in heaps for five or six weeks, in which time they are properly prepared for the hot house.* In getting them into pine pits, if they appear dry, we water them again, treading them in layers exceedingly well till the pit is quite full. We then cover them with tan to the thickness of two inches, and tread it well till the sarface becomes smooth and even. On this we place the pine pots in the manner they are prepared to stand, beginning with the middle row first, and filling up the spaces between the pots with tan. In the like manner we proceed with the next row, till the whole is finished; and this operation is performed in the same manner as when tan only is used.

Thus prepared, they will continue a constant and regular heat for twelve months, without stirring or turning; and if I may form a judgment from their appearance when taken out (being always entire and perfect,) it is probable they would continue their heat through the second year."

After some further details the writer observes, "I believe oak leaves are preferable to those of any other sort; but I have found by repeated trials, that the leaves of beech, Spanish chesnut, and hornbeam, will answer the purpose very well. It seems that all leaves of a hard and firm texture are very proper; but soft leaves that soon decay, such as lime, sycamore, ash and those of fruit trees generally, are very unfit for this mode of practice."

The superiority of oak leaves as a material for hot beds according to this writer, consists in the following particulars: "They always heat regularly during the whole time I have used them, which is nearly twenty five years, I never once knew their heating with violence.

The heat of oak leaves is constant; whereas tanner's bark generally turns cold in a short time, after its furious heat is gone off.

There is a saving in point of expense, and decayed leaves make good manure; whereas rotten tan is experimentally found to be of no value."

In our own experience in constructing hot beds we have found leaves a very important article; when mixed with horse dung they serve to moderate the powerful heat of it; the heat is longer continued in the bed than when horse dung alone is used.

*Leaves for pits in forcing houses are no longer necessary since the improved mode of heating by hot water pipes; but for hot beds they are much superior to horse dung.

For the N. E. Farmer.

LIVERPOOL AGRICULTURAL SOCIETY.

Mr. Editor:—I make the following extract from the illustrated London News of 28th of October, perhaps you may think it worth laying before the readers of the N. E. Farmer. L.

The Liverpool Agricultural Society. The annual meeting of this society took place on Tuesday, presided over, as usual, by the new peer, Baron Stanley, of Bickerstaff. Nothing marked the proceedings, except the speech of the President himself. That noble lord, after expatriating upon the advantages of such societies, adverted to the improvements which were progressing in farming. Baron S. in the course of his remarks upon these improvements, said: It was not more than four or five years ago that he (Baron Stanley,) at the meeting of the Royal Agricultural Society of England, when it was held in Liverpool, had taken the opportunity of mentioning a new manure, guano, as applicable and valuable for land. At that time only a single cargo had arrived in Liverpool, and now, if he was not misinformed, from the single port of Liverpool only, no less than one hundred and fifty vessels were engaged in the importation of that then unknown manure. It was not merely in such matters as that he looked for advantage from the society, but on all sides he saw old and useless fences disappearing, fields being enlarged, and deep and thorough draining of the land taking place. He had heard of some old farmers who disapproved of such improvements. It had been said that it was useless growing more on the land, for if they did, the landlord would get the benefit of it. This was a very fallacious notion; for, in point of fact, by improvement they did not grow more upon the land, but a different kind of crop—wheat, instead of weeds.

In reference to draining, he said, "on my father's property in this neighborhood, there has been laid down at his expense, and charging 5 per cent. interest to the tenants, which, I believe, they most gladly and willingly acknowledge they have over and over again received the benefit of—in this last year we have laid down in deep draining somewhere about three hundred miles of drains at an expense of between £5000, and £6000, and I think, employed about 1,500,000 draining tiles."

A Love Gift for 1845: Boston, Saxton, Peirce & Co.

This neat book of Poems, (a reprint of an English work,) is a very appropriate Christmas or New Year's present. It is elegantly bound in cloth, and ornamented with a splendid plate, printed in five different colors, 1 vol. 16mo. 75 cents.

A great variety of interesting works may be found at Messrs. Saxton, Peirce & Co., 133 Washington Street, in fancy and highly ornamented binding, or in a more humble form, suitable for tokens of love and affection.

MASS. HORTICULTURAL SOCIETY.

EXHIBITION OF FRUITS.

Saturday, Dec. 14, 1844.

By Mr. McLennan—Pears; var. Passe Colmar, Martin Sec, Louise Bonne, Beurre Diel, Glout Morceau, (delicious) Chaumontel, and one unknown. Martin Sec and Louisa Bonne are worthless.

By Mr. Cole—Apples; Golden Ball, good; a red apple, from the farm of Mr. Samuel Tewksbury, Putting point, Chelsea, very fine. Also, the Milford Apple, good.

S. Walker, Roxbury, presented Apples from John Richardson, Esq. Dorchester, viz:—Ortley Pippin, and a fine striped var. for a name—fine, but unknown.

Saturday, Dec. 21, 1844.

Samuel I Gustin, Esq. Morristown, N. J., by Hon. B. V. French, some very superior specimens of Fruit, viz: Apples—Egg Top, Kaighn's Spitzenberg, fine, Michael Henry, Wine sap, fine, Cooper's Redling, fine, Hay's, or Wine, fine, Smith, Cider, Jersey Greening, Roman Stem, Sheep's Nose, Seek-no-further, White, delicious, Bellflower? Pears—No. 1, unknown, 2 Glout Morceau, 3 and 4 alike, Easter Beurre.

From Mr John M. Ives, Salem, presented by Mr Wm Kenrick. No. 1 Minister, fine; 2, Baldwin; 3, Specimen, do. (see N. E. Farmer, 4th Dec.) 4, Swaar, fine; 5, Catline; 6, Rambo or Romanite, good; 7, Lemon Pippin of England?; 8, Red Doctor apple, good; 9, Seaver sweet; 10. Michael Henry; 11, Danvers winter sweet, good; 12, Golden Reinette of England; 13, Mela Carla?; 14, Bullock's Pippin; 15, Aunt Hannah; 16, Hubbardston Nonsuch. Pears, 17; Clion or Mons LeCure; 18, Passe Colmar; 19, Easter Beurre, fine; 20, Josephine; 21, Lady Finger, of Coxe; 22, Catillac, fine specimen.

Mr. John Clarke—Apples for a name.

Mr. French exhibited several specimens of his collection of Apples, among them the Seek-no-further (white) which we place among the best, if not *the* best of the season.

Apples the Old Nonsuch, by S. Walker, Roxbury.

For the Committee. S. WALKER, *Chairman.*

MAS HO RTICULTURAL SOCIETY.

NOTICE. The Committee on Fruit will have a meeting to award premiums for the present season, at the Society's Rooms on SATURDAY next, 28th inst. at 12 o'clock, noon. The members are requested to be present.

Per order of the Committee.

Dec. 24. S. WALKER, Chairman.

THERMOMETRICAL.

Reported for the New England Farmer.

Range of the Thermometer at the Gardenof the proprietors of the New England Farmer, Brighton, Mass in a shaded Northerly exposure, to the week ending Dec. 22.

Dec. 1844.	7 A.M.	12, M.	5, P.M.	Wind.
Monday,	16	23	32	28	N. W.
Tuesday,	17	16	25	23	N. W.
Wednesday,	18	19	19	18	N. W.
Thursday,	19	20	30	29	N. W.
Friday,	20	17	22	22	N. W.
Saturday,	21	5	24	21	N. W.
Sunday,	22	34	38	36	N. E.

BRIGHTON MARKET.—Monday, Dec. 23, 1844.

Reported for the N. E. Farmer.

At market 800 Beef Cattle, 1000 Sheep and 550 Swine. 150 Beef Cattle unsold.

Prices — *Beef Cattle* —The prices obtained last week for a like quality were hardly sustained. We quote a yoke or two extra $4,88 a 5,00 First quality, $4,50 a 4,75 Second quality, $4 a 4,12½. Third quality, $3,50 a 3,75. Six beautiful cattle from Athol, Mass., were sold for $5,50. The price was made several weeks since.

Sheep —Common sheep from $1,50 to 2,00. A lot of fed weathers $4,00

Swine.—Two lots of old Hogs 3 cents. A lot of small selected shoats 3½ and 4½. At retail from 4 to 5.

WHOLESALE PRICES CURRENT.

Corrected with great care, weekly.

SEEDS. Herds Grass, $1 37 a 1 50 per bushel. Red Top 50 to 60 cents. Clover—Northern, 9 to 11c.—Southern, 7 a 9 c. Flax Seed. $1 50 per bushel. Lucerne, 33 c. per lb. Canary Seed. $1 37 a 1 75 per bushel.

GRAIN. The transactions of the week comprise nearly all the late arrivals, and dealers being now amply supplied, the market close with a more languid demand.

Corn—Northern, new, bushel 00 00—Southern, round yellow, 56 a 57—Southern flat yellow, 54 a 55—do. do. white 52 a 53--do New Orleans, 00 a 00—Barley 00 a 00—Rye, Northern, 70 a 75—do. Southern, 65 a 75 —Oats, Southern, 33 a 34 — Northern do. 35 to 37—Beans, per bushel 1 50 a 1 75.—Shorts, per double bush. 25 a 30—Bran, 21 a 24.

FLOUR There is usually but little doing at this season of the year. The late arrivals from New Orleans have about all passed from first hands, and we do not learn that there is much stock of that description of flour on the way to this market.

Baltimore, Howard Street, 4 mos. cr. new, $4 81 a 4 87 —do. wharf, $0 00 a 0 00—do. free of garlic, $0 00 a 0 00 —Philadelphia do. 4 mos. $4 67 a 4 75 — Fredericksburg, low l'd new $4 67 a 4 75—Alexandria, wharf, 4 67 a 4 75 —Georgetown, $4 75 a 4 87—Extra do. 0 00 a 5 00—Richmond Canal, $4 68 a 4 75—do. City, $5 50 a 0 00—Petersburgh, City, $5 00 a 5 50 —do. Country $4 68 a 4 75—Genesee, common, cash, $4 87 a 4 94— do fancy brands $5 00 a 5 37—Ohio via Canal, $0 00 a 0 00—do do New Orleans, cash $4 75 a 4 87. Rye, $0 00 a 0 00—Indian Meal in bbls. $0 00 a 2 75.

PROVISIONS. There is a decided improvement in public feeling in relation to Beef and Pork, and also for Lard owing in a great measure to an apparent deficiency of these articles in all the western markets.

Beef—Mess 4 1 10 new bbl. $8 00 a 8 50—Navy—$7 00 a 7 25.—No. 1, $6 00 a 6 50—do Prime 5 00 a 0 00—Pork—Extra clear 4 mo bbl. $11 00 a 00 00—do Clear $10 00 a 10 50 do. Mess, $9 00 a 9 50—do Prime $7 00 a 7 50—do Mess from other States,— a — —do Prime do do $0 00 a 0 00 do. Cargo do. 0 00 a 0 00 —Clear do do $00 00 a 00 00—Butter, shipping, 00 a 00—do store. uninspected, 10 a 13—do dairy, 14 cts. a 16—Lard, No. 1, Boston ins. 00 a 0 —do South and Western, 6 a 6¾— Hams, Boston, 7 a 00 — Southern and Western, 6 a 6¾—Cheese, Ship'g and 4 meal, 3 a 4½—do new milk, 4 a 5½.

WOOL. Duty. The value whereof at the place of exportation shall not exceed 7 cts. per pound, 5 per cent. ad val. All whereof the value exceeds 7 cts. per pound, 40 per ct. ad. val. and 3 cts per pound.

There has been a steady demand during the week to supply the immediate wants of manufacturers. The market indicates a more settled condition, but prices are lower than at shearing time.

Prime or Saxony Fleeces, washed, lb. 45 a 50 c.--American full blood do 40 a 42--Do 3-4 do 37 a 38—Do. 1-2 do 35 a 36 -1-4 and common do 30 a 32 — Smyrna Sheep, washed, 20 a 22-- Do. unwashed, 10 a 15 —Bengasi do 6 a12--Saxony, clean. 00—Buenos Ayres unpicked, 7 a 10— do. do. picked, 10 a 14—Superfine Northern pulled lamb 38 a 40—No. 1 do. do. do. 33 a 35—No. 2 do do do 23 a 30—No. 3 do do do 14 a 18.

HOPS. Duty 20 per cent.

During the past week the article has been in limited demand. The accounts by the Acadia quote a good demand, at advancing prices.

1st sort Mass 1843 lb. 13 a 14 ; 2d do 0 a 0.

HAY, 16 to 18 per ton—Eastern Screwed $13 to 14,

EGGS. 15 to 20.

BEMENT'S AMERICAN POULTERER'S COMPANION.

The American Poulterer's Companion — A Practical Treatise on the Breeding, Rearing, Fattening and General Management of the various species of Domestic Poultry, with Illustrations and Portraits of Fowls taken from life. By C. N. Bement. Albany. Published by Saxton & Miles, New York. For sale by JOSEPH BRECK & CO.— Price $1 25.

BACK VOLUMES OF THE AMERICAN AGRICULTURIST.

JOSEPH BRECK & CO. have received a few sets of the 3 back volumes of the American Agriculturist, elegantly bound in cloth. Price $3 75 per sett.

HOWARD'S PREMIUM SUBSOIL PLOWS.

The sub-oil Plow is unquestionably the most important agricultural implement of modern invention. It is considered by the best informed practical farmers of Great Britain and our own country, as an indispensable article in the most profitable husbandry. Says that eminently skilful and intelligent agriculturist, Mr. Phinney, of Lexington : "such is the estimate in which I hold this important implement, that I should consider it a great piece of improvidence to put in a crop without first subsoiling the ground." The subsoil Plows manufactured by Mr. Howard, are of two sizes—the smaller obtained the highest premium offered by the State Agricultural Society at its late exhibition at Worcester. The committee to award the premium on Subsoil Plows, in their report say: —"The committee were pleased with the neatness and firmness of structure of these Plows—characteristics which have distinguished all the Plows of Mr. Howard that have come within their observation. *Utility* and not *show*, are their peculiar features. * * They were astonished to find with what ease and perfection the hard pan could be stirred, and broken to the depth and width of 8 or 9 inches, for such was the operation of the medium size Plows, with a power not exceeding that ordinarily required for moving a surface Plow at the same depth—and they found the Plow might be guided with less labor ahd fatigue than the surface Plow. * * They confidently recommend the subsoil Plow to the attention of the farmers of the Commonwealth."

The improvement in the length of the handles of Mr Howard's Plows, suggested by the committee, has been made—and the undersigned are now prepared to furnish these invaluable implements wholesale and retail.

JOSEPH BRECK & CO.

N. E. Agricultural Warehouse and Seed Store. 51 & 52, North Market Street, Boston.

Dec 18, 1844. tf.

CIDER MILL FOR SALE.

A first rate Cider Mill, with good Screws, in complete order, will be sold cheap, by JOSEPH BRECK & CO.

July 23.

BARN DOOR ROLLERS AND IRON RODS

For sliding Doors, Axletrees, Steel Springs, and Tire Iron for sale by H. RICHARDS,

Sept. 18. No. 109, State Street

HOES.

The best kind in the Market For sale by

JOSEPH BRECK & CO.

GRINDSTONES ON FRICTION ROLLERS.

Grindstones of different sizes, hung on friction rollers and moved with a foot treader, are found to be a great improvement on the old mode of hanging grindstones. Stones hung in this manner are becoming daily more in use, and wherever used, give universal satisfaction. The rollers can be attached to stones hung in the common way. For sale by J. BRECK & Co., No. 51 North Market street.

HYACINTHS, TULIPS, &c.

The subscribers offer for sale a choice collection of Hyacinths, embracing double and single, red, rose, white, blue, yellow, and every shade. Also, Tulips, Lillies, Pæonies, Crocus, and every variety of bulbous and tuberous roots.

JOSEPH BRECK & CO.

Boston, Oct. 15, 1844.

JOSEPH BRECK & CO.,

NEW ENGLAND

Agricultural Warehouse

AND

SEED STORE.

51 and 52 North Market Street, Boston.

JOSEPH BRECK & CO. having received a full and general assortment of FIELD, GRASS, GARDEN and FLOWER SEEDS, worthy of cultivation, confidently recommend them as being pure and of the first qualities, unmixed with other varieties; they have no hesitation in saying that their collection of Seeds is the best, and of the greatest variety ever offered for sale at any establishment in the U. States.

AGRICULTURAL BOOKS of all kinds, constantly on hand.

AGRICULTURAL AND GARDEN IMPLEMENTS of all kinds, among which are the following, viz :—1000 Howard's Patent Cast Iron Ploughs, 200 Common do. do, 200 Cultivators, 100 Greene's Straw Cutters, 50 Willis' do. do. 100 Common do. do, 100 Willis' Patent Corn Shellers, 50 Common do. do, 200 Willis' Seed Sowers, 50 do. Vegetable Cutters, 50 Common do. do., 200 Hand Corn Mills, 200 Grain Cradles, 100 Ox Yokes, 1500 Doz. Scythe Stones, 3000 do. Austin's Rifles, 100 doz. Cast Steel Shovels, 150 do. Common do. 100 do. Spades, 500 do. Grass Scythes, 300 do. Patent Snaiths, 200 do. Common do., 500 do. Hay Rakes, 200 do. Garden do., 200 do. Manure Forks, 300 do. Hay do. 500 Pair Trace Chains, 100 do, Truck do. 100 do. Draft do, 500 do. Tie up do, 50 doz. Halter do, 1000 yards Fence do, 25 Grind Stones on Rollers.

JOSEPH BRECK & CO.,

N. E. Agricultural Warehouse and Seed Store, 51 and 52 North Market Street, Boston.

GARDEN AND FIELD SEEDS.

The subscribers are now receiving their fall supply of Garden, Field and Grass Seeds, and would respectfully recommend to their customers to send in their orders as early as possible to secure a supply from their choicest lots. Their stock of seeds for this season will be very full and complete, and most of the varieties being raised under their own inspection they can confidently recommend them as being fresh and genuine. Among them are Long Blood, Early Turnip and Sugar Beets; Ruta Baga, Mangel Wurtzel, Orange Carrot, Radish. Cucumber and Cabbage of sorts. Also, Peas, Beans and Squashes, which together with a large supply of most kinds of seed desirable for the field or garden, comprise the most complete and extensive assortment of seeds to be found at any similar establishment in the country. JOSEPH BRECK & CO.

Oct. 2.

MILK ESTABLISHMENT FOR SALE.

The subscriber being about to relinquish the milk business, offers for sale, his entire milk establishment, consisting of 23 Cows, 1 Milk Cart and Wagon, and an excellent run of custom. JOHN PARKINSON,

Oct. 16, 1844. Walnut Street, Roxbury.

AFRICAN GUANO.

The cargo of the brig Samos, just arrived direct from Africa. This Guano has been analyzed by J. E. Teschemacher, Esq., and pronounced by him as fully equal to the best cargoes received in the London or Liverpool markets. Purchasers can depend on this as being the *genuine* article. For sale, in quantities to suit, by

CHARLES HOFFMAN, Salem.
VERNON BROWN, 5 Merchants' Exchange.
J. BRECK & CO. 51 & 52 N. Market St., up stairs.

Sept. 17 3m.*

CORN SHELLER.

A Corn sheller is one of the most convenient and labor saving implements that the practical farmer has in use. Various machines for this purpose have been invented. It can be used in all cases for large or small sized ears. It is very simple in its construction, and durable in its operation, and no way liable to get out of order; one man can work it to good advantage, though a man to turn, and a boy to feed it, works it much better than one alone. They are so light and portable, as to be easily removed from place to place, and one machine will serve for several families or even the in habitants of a small town.

For sale at the Agricultural Warehouse and Seed Store Nos. 51 and 52, North Market Street.

JO. BRECK & CO.

CAST IRON SLED SHOES

For double and single Runners, of all sizes, also, Barn Door Rollers, from 3 to 10 inches, for sliding doors, for sale by HENRY RICHARDS,

Dec. 7, 1844. No. 109, State street.

MISCELLANEOUS.

Eastham.—According to Pratt's History of Eastham, just published, this is the only town in Barnstable county, that raises grain sufficient for its own consumption. More than a thousand bushels of corn are sent to market.

There is a pear tree now standing on the farm, formerly of Governor Prince, near the spot where his house stood, which was planted by himself—probably two hundred years ago. Mr Prince was first elected governor of the colony in 1634.

In 1651, it was ordered by the Colony Court, that if any lazy, slothful, or profane persons, neglect to come to the public worship of God, they shall forfeit for every default, ten shillings, or be publicly whipped.

In 1652, the town ordered that the constable have power to collect the fines on persons who were negligent in coming to town meetings, on information being given by the town clerk; the constable to have one-half, the town the other.

In 1662, the town agreed that a part of every whale cast on shore, be appropriated for the support of the ministry.

In 1664, it was agreed between Mr Samuel Freeman and the town, that he should pay the rate, for which the town was prosecuted by the Court, as their part of the expenses of the government, one-half in money, and the other in peas and wheat; and for so doing, he should have a black horse running at large at Pamet, it being the town's property; and that he should also serve as a trooper for the town three years.

In 1665, the town voted that all the horses belonging to the inhabitants, should be marked on the fore-shoulder with the letter E, to distinguish them from those which belonged to the inhabitants of other towns, they having a different mark.

It was also voted by the town, that all persons who should stand out of the meeting-house during the time of divine service, should be set in the stocks.

In 1667, the town voted that every house-keeper should kill twelve blackbirds, or three crows, which did great damage to the corn; and this vote was repeated for many years.—*Bost. Courier.*

Immigration.—The following is an abstract from the official report of the State Department, showing the number of foreigners that have arrived in the United States during the year ending September 30, 1844:

At Maine,		3,649
New Hampshire,		256
Vermont,		197
Massachusetts,		6,440
Rhode Island,		154
Connecticut,		58
New York,		59,762
Pennsylvania,		4,886
Delaware,		32
Maryland,		5,006
District of Columbia,		32
North Carolina,		5
South Carolina,		330
Florida,		58
Louisiana,		3,889
Total,		84,764
Of which were males,	48,897	
females,	35,867	
		84,764

The Roman Catholic Church in the U. States.—There were in this country, fifty years ago, but 1 bishop and 25 priests of this denomination, with a few scattered churches. There are now 21 bishops and nearly 1000 priests, with 700 churches and about 500 missionary stations. They have 48 academies, 21 ecclesiastical seminaries, 36 nunneries, and 26 orphan asylums. Their increase is at a ratio of nearly 100 per cent. every ten years, being, of course, largely aided by emigration. The increase of the *general* population is 34 per cent. There are two societies in Europe whose principal object is to convert this country to the doctrines of the Catholic church, viz: the Leopold Foundation, in Austria, and the Society of St. Charles, Borromeo in Lyons. The latter transmitted to this country in 1840, $163,000, and in 1842, $177,000.—*Philad. North American.*

Going Through the Motions.—A fellow who, unfortunately for himself and family, from being a very good husband, took to drinking, and soon became an idle vagabond, came home one night, after having, as usual, been on a debauch, and began to call lustily—

"Wife! wife! I say, give me some supper!"

The poor wife, who, while she could do so, provided food for the family by her own toil, informed him, with tears in her eyes, that there was nothing to get a supper out of.

"What!" said he, "hav'nt you a piece of cold meat?"

"No!"

"Give me a crust of bread, then."

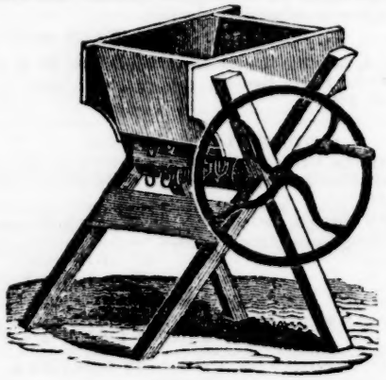
He was told there was none.

"What! have you *nothing?*"

"Nothing at all," replied the poor wife, "not even a crumb."

After a pause—"Very well, very well! give me a clean plate, knife and fork! By Jupiter! *I'll go through the motions*, any how!"

The Editor.—Some one says, "The editor's pen is his plow"—and it is very truly added—"he often does more plowing than *reaping*."



WILLIS'S
Latest Improved Vegetable Cutter.

For sale at the New England Agricultural Warehouse, No. 51 and 52 North Market Street, Boston, Willis's Latest Improved Vegetable Cutter. This machine surpasses all others for the purpose of Cutting Ruta Baga, Mangel Wurtzel, and other roots. The great objection to other machines, is their cutting the roots into slices, which makes it almost impossible for the cattle to get hold of them: this machine with a little alteration, cuts them into large or small pieces, of such shape as is most convenient for the cattle to eat. It will cut with ease from one to two bushels of roots per minute.

JOSEPH BRECK & CO.

Nov. 1.

GREEN'S PATENT STRAW CUTTER.

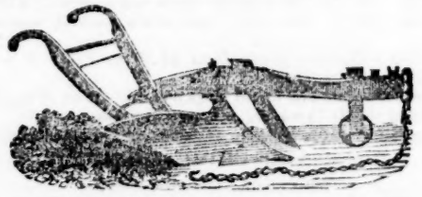
JOSEPH BRECK & CO. at the New England Agricultural Warehouse and Seed Store Nos. 51 and 52 North Market Street, have for sale, Green's Patent Straw, Hay and Stalk Cutter, operating on a mechanical principle not before applied to any implement for this purpose. The most prominent effects of this application, and some of the consequent peculiarities of the machine are:

1. So great a reduction of the quantum of power requisite to use it, that the strength of a half grown boy is sufficient to work it efficiently.

2. With even this moderate power, it easily cuts two bushels a minute, which is full twice as fast as has been claimed by any other machine even when worked by horse or steam power.

3. The knives, owing to the peculiar manner in which they cut, require sharpening less often than those of any other straw cutter.

4. The machine is simple in its construction, made and put together very strongly. It is therefore not so liable as the complicated machines in general use to get out of order.



HOWARD'S IMPROVED EASY DRAUGHT PLOUGH.

Great improvements have been made the past year in the form and workmanship of these Ploughs; the mould board has been so formed as to *lay the furrow completely over, turning in every particle of grass or stubble, and leaving the ground in the best possible manner.* The length of the mould board has been very much increased, so that the Plough works with the greatest ease, both with respect to the holding and the team. The Committee at the late trial of Ploughs at Worcester, say,

"Should our opinion be asked as to which of the Ploughs we should prefer for use on a farm, we might perhaps say to the inquirer, if your land is mostly light and easy to work, try Prouty & Mears, but if your *land is heavy, hard orrocky,* BEGIN WITH MR. HOWARD'S."

At the above mentioned trial the Howard Plough *did more work, with the same power of team, than any other plough exhibited.* No other turned more than twentyseven and one half inches, to the 112 lbs. draught, while the *Howard Plough turned twentynine and one half inches, to the same power of team!* All acknowledge that Howard's Ploughs are much the strongest and most substantially made.

There has been quite an improvement made on the shoe, or land side of this Plough, which can be renewed without having to furnish a new landside: this shoe likewise secures the mould board and landside together, and strengthens the Plough very much.

The price of the Ploughs is from $6 to $15. A Plough sufficient for breaking up with four cattle, will cost about $10 50, and with cutter $1, with wheel and cutter, $2 50 extra.

The above Ploughs are for sale, wholesale and retail, at the New England Agricultural Warehouse and Seed Store Nos. 51 & 52 North Market Street, by

JOSEPH BRECK & CO.

NEW ENGLAND FARMER.

A WEEKLY PAPER.

Terms, $2 per year *in advance*, or $2 50 if not paid within sixty days.

N. B.—Postmasters are permitted by law to frank all subscriptions and remittances for newspapers, without expense to subscribers.

TUTTLE AND DENNETT, PRINTERS,
21 SCHOOL STREET.